

**Fond du Lac Tribal and Community College
COURSE OUTLINE FORM**

Updated 11/25/14

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by: _____

2. Date submitted: _____

3. Date approved: _____ Date revised 03/25/15

4. Department/discipline: Physical Education/Geography

5. Department(s) endorsement(s): _____

(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: Using GPS: Geocaching and Field Mapping

Abbreviated course title (25 characters or less): _____

7. Course Designator: PE/GEOG

8. Course Level: 1054

9. Number of Credits: Lecture _____

Lab 1 (Repeatable)

10. Control Number (on site) 20

Control Number (online) _____

11. Catalog/Course description:

Curious about how to use a GPS unit? This course will inform students about the Global Positioning System (GPS) through both conceptual and hands-on applications, such as geocaching and field data collection. GIS software and associated applications will also be introduced.

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s):

Co-requisite:

13. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Text: Determined on a yearly basis depending on availability and content

Additional resources:

Handheld GPS receivers and associated accessories

GIS Lab (Room 208) with Esri's ArcGIS software installed on networked PCs

Outdoor activities locally

Supplemental resources

14. **Course Content** (Provide an outline of major topics covered in course)

GPS Concepts – Satellites and the DoD

GPS Positioning Modes

Differential Corrections – Accuracy

Selective Availability – Accuracy

Pros and Cons of GPS

Datums, Coordinate Systems, and Map Projections

Who uses GPS and what are they using it for? (GPS Application)
Hands-on operation of a GPS receiver
Integrate position data collected with a GPS unit with GIS software
Responsible geocaching

15. Learning Goals, Outcomes, and Assessment

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

- A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
- B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
- C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
- D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Course Learning Outcomes will fulfill the identified competencies.

Course Learning Outcomes.

Upon completion of this course, the student will be able to:

- 1. Describe the global positioning system and how it works (A, B)
- 2. Identify the differences between recreational-grade and map-grade GPS receivers (A)
- 3. Identify applications of GPS (A, B, C)
- 4. Operate a GPS receiver to locate a geocache (A, C)
- 5. Perform responsible geocaching (C, D)
- 6. Collect data from the field (A, C)
- 7. Apply programming to complete an activity (C)

16. Minnesota Transfer Curriculum (MnTC): If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See www.mntransfer.org

Goal Area(s): _____